DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposal To Determine the June Sucker (Chasmistes liorus) to be an Endangered Species With Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine the June sucker (*Chasmistes liorus*) to be an endangered species and to designate its critical habitat under the authority of the Endangered Species Act of 1973, as amended. The June sucker occurs only in Utah Lake, Utah and its major tributaries. It uses the lower portions of the Provo and Spanish Fork Rivers, the two largest tributaries of Utah Lake, for spawning and larval rearing. It is threatened with habitat alteration through dewatering and degrading water quality, competition and predation by exotic species, and illegal killing during the spawning run. Also, it has been suggested that the Central Utah Project (portions of the Bonneville unit), presently under construction, could impact this species by reducing and changing flows in the Provo River, the major spawning site of the June sucker, and affect portions of Utah Lake resulting in habitat loss for the species while potentially increasing habitat for exotic species. However, recent discussions between the Fish and Wildlife Service's Regional Endangered Species staff and representatives from the Bureau of Reclamation, Utah Water Conservancy District, and the Utah Division of Wildlife Resources have indicated that the proposed listing is

compatible with the development of this project. This proposal, if made final, would implement protection provided by the Endangered Species Act of 1973, as amended. The Service is requesting comments on this action.

DATES: Comments from all interested parties must be received by August 31, 1984. Public hearing requests must be received by August 16, 1984.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225. Comments and materials received will be available for public inspection, by appointment, during normal business hours of the Service's Regional Endangered Species Staff at 134 Union Boulevard, 4th floor, Lakewood, Colorado.

FOR FURTHER INFORMATION CONTACT: Dr. James L. Miller, Staff Biologist, Regional Endangered Species Office, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225 (303/234–2496 or FTS 234–2496).

SUPPLEMENTARY INFORMATION:

Background

The June sucker (*Chasmistes liorus*) is endemic to Utah Lake in Utah and uses the lower portions of the Provo and Spanish Fork Rivers, the two largest tributaries of Utah Lake, for spawning and larval rearing. Utah Lake is a 38,000-hectare (approximately 38 kilometers long and 21 kilometers wide at the maximum points) remnant of ancient Lake Bonneville. The lake is shallow, slightly saline, turbid, highly eutrophic, and is the largest freshwater lake located entirely in Utah. The lake has an average depth of 2.9 meters and a maximum depth of 4.2 meters. In 1885, the compromise elevation (maximum level Utah Lake would be allowed to fill) was established at 1,368.35 meters (Radant and Sakaguchi, 1981).

The June sucker was first collected and described by David S. Jordan in 1878 (Jordan, 1878). The common name June sucker is based on the fact that peak spawning time for this species occurs during the month of June. Some confusion has existed over the systematics of Utah Lake suckers in recent years. It has been reported that at least three species of suckers occurred in Utah Lake (Stubbs, 1966; Lowder, 1951; and Jordan, 1878). However, recent information presented by Miller and Smith (1981) suggested that only two species, the Utah sucker (*Catostomus ardens*) and the June sucker occurred in Utah Lake. June suckers are readily distinguished from Utah suckers by their subterminal mouth, relatively smooth divided lips, broad skull and greater numbers of gill rakers. The June sucker spawns in June while Utah suckers spawn in early April (Radant and Hickman, 1984).

Recently, Miller and Smith (1981) concluded that the June suckers present in Utah Lake today are different from the June suckers collected prior to 1900. They have hypothesized that the June and Utah suckers hybridized during the 1932 to 1935 drought when fish populations were stressed. As June suckers returned to abundance, the new genes were incorporated into the population and have become normal characteristics. They have assigned *Chasmistes liorus liorus* to specimens collected in the late 1800's and *Chasmistes liorus mictus* to specimens collected after 1939. However, to avoid confusion, this proposal is viewing the June suckers as a full species, since it has maintained its distinctiveness from other suckers and is not known to hybridize with any species today.

Decline in abundance of June suckers can be attributed to habitat alteration through dewatering and degrading water quality, competition and predation by exotic species, commercial fishing, and killing of the adults during the spawning run.

Historically, the June sucker was very abundant in Utah Lake. Jordan (1891) reported millions of suckers existing in the lake when he visited there in 1889. As a result of this visit, he proclaimed Utah Lake as "the greatest sucker pond in the universe." In the late 1800's it was estimated that 1,361 metric tons of spawning suckers were killed in 3.3 kilometers of the Provo River due to dewatering (Carter, 1969). Carter (1969) again reported that 2.3 metric tons of suckers were removed from a dewatered irrigation ditch during the early 1920's.

Utah Lake suckers were an important part of the total commercial fish harvest until their numbers became too low. Cope and Yarrow (1875) reported that the June sucker was extremely numerous and the fishermen considered them a nuisance; however, they sold readily in the winter for an average price of 2½ cents per pound (Cope and Yarrow, 1875, reported that fresh trout were selling for 30 cents per pound during this same period). In the early 1900's, commercial fishermen were still reporting large catches of suckers annually. Between 1901 and 1905, an average of 162 metric tons of suckers were harvested annually (Carter, 1969). Larger numbers of suckers were still being caught in the early 1950's; Lowder (1951) reported that in 1951, as many as 1,350 suckers could still be taken in a single day of commercial seining. Today, few, if any, suckers are captured in the nets of commercial fishermen in Utah Lake.

Hundreds of tons of suckers were lost during the 1932 to 1935 drought due to crowing and freezing when irrigation practices nearly drained Utah Lake dry (Tanner, 1936). Tanner (1936) reported that in the spring of 1935 there were no suckers running up the Provo River to spawn, "Something that had never happened before in the history of Utah Lake."

In 1951 suckers were still considered to be the second most abundant species in Utah Lake. However, by 1959 suckers were the fourth most abundant species in the Lake with gillnet catch rates of 0.16 suckers per net hour (Arnold, 1959). Similar gillnetting efforts in 1970 captured only 0.01 suckers per net hour (White and Dabb, 1970). During this 1970 study, suckers were reported to be the sixth most abundant species in the lake.

An intensive inventory of the Utah Lake fishery during 1978 and 1979 using a variety of sampling gear resulted in 2,097 separate net collections which captured 34,292 adult fish. However, only 102 (0.3 percent of the total catch) were identified as June suckers, while only 18 were identified as Utah suckers. The Utah sucker is still abundant in areas outside Utah Lake. No young-of-the-year suckers were taken during the study. Gillnetting collections during this study produced no suckers (Radant and Sakaguchi, 1981).

The decline of sucker numbers to present levels appears to correspond closely with the introduction of white bass and walleye in the mid-1950's. Competition and predation from exotic species is one of the serious threats to the survival of the June sucker. Over 20 exotic fish species have been introduced into Utah Lake during the past 100 years. Radant and Sakaguchi (1981) reported that the most successful introductions of exotic species has been with the carp (1886), largemouth bass (1890), black bullhead (1893), channel catfish (1919), walleye (1955), and white bass (1956). The dominant fish in Utah Lake today are the white bass, walleye, cannel catfish and carp, all exotic species.

Declines in the June sucker can also be attributed to killing during the spawning run. The sucker is highly vulnerable at this time; often their backs are out of the water. This aspect, in addition to clear water conditions and the congregating nature of their spawning behavior, makes them easy prey for guns, arrows, rocks, nets, etc.

The State of Utah in 1983 included this species on its protected list, making it illegal to capture or kill the June sucker. However, the potential for illegal killing still occurs, especially during low water years.

Prior to 1978, biological information for the June sucker was virtually nonexistent, and even today much remains to be learned about this species. Due to their rarity, little biological data have been collected pertaining to their life history requirements in the lake. Much of the information pertaining to biological requirements of the species deals with the spawning and larval rearing period in the Provo River. June sucker spawning is restriced primarily to the Provo River, with limited spawning probably occurring in the Spanish Fork River (Radant and Sakaguchi, 1981; Shirley, 1983; Radant and Hickman, 1984). The adult June sucker ascends the Provo River during the second or third week of June (on the average) and completes spawning within 5 to 8 days. They travel as far as 6 kilometers upstream to a diversion barrier. Spawning occurs throughout this reach of river. Details on spawning behavior, habitat, water velocities, hatching time, larval development, etc., can be found in papers by Shirley (1983) and Radant and Hichman (1984).

Young-of-the-year June suckers have been collected in the Provo River up to 5 months after hatching. However, no young-of-the-year or juvenile suckers are known to have been collected from Utah Lake in recent years. Accurate population estimates for the June sucker have not been made. It is suspected that there are less then 1,000 adults (based upon spawning run estimates) today. They all appear to be over 15 years in age. It is possible that the June sucker population existing today is very old, with little or no recruitment occurring.

Past actions affecting this taxon began on December 30, 1982, when the Service included the June sucker in a notice of review published in the **Federal Register** (47 FR 58456). This notice pertained to vertebrate species that were currently under review for listing as endangered or threatened. This notice indicated that substantial information was available to support the biological appropriateness of proposing to list this species as endangered or threatened. On April 12, 1983, a petition was received by the Service from the Desert Fishes Council requesting that the June sucker be listed as an endangered species. A notice of finding on this petiton was published by the Service in the June 14, 1983, **Federal Register** (48 FR 27273). This notice stated that the petition was accepted and that the Service had 1 year from the date that the petition was received to publish its findings in the **Federal Register**. This proposed rule constitutes the required 1-year finding in accordance with section 4(b)(3)(B)(ii) of the Act.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate the 1982 Amendments—see proposal at 48 FR 36062, August 8, 1983) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the June sucker (*Chasmistes liorus*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Alteration of habitat has been a major factor in the decline of this species. Currently, the main threats to the June sucker are: (1) Habitat modification through the diversion of water for irrigation, municipal, and industrial purposes; and (2) the possibility of habitat modification from upstream impoundments associated with the Central Utah Water Project. However, recent discussions between the Fish and Wildlife Service's Regional Endangered Species staff and representatives from the Bureau of Reclamation, Utah Water Conservancy District, and the Utah Division of Wildlife Resources has indicated that the proposed listing is compatible with the development of this project. Alteration of habitat through water diversions and intermittent releases from upstream impoundments could seriously impact the spawning habitat of the June sucker. If a large volume of water was diverted during a drought year it could adversely modify the lake habitat.

B. *Overutilization for commercial, scientific, or educational purposes.* Illegal killing of the adult June suckers occurs during the spawning migration. This is usually done with guns, arrows, rocks, nets, etc. Although the State of Utah has included this species on its protected list, illegal killing still occurs, especially during low water years. The species is very vulnerable during this time period. It is possible that a majority of the entire June sucker population is concentrated in one section of the Provo River during this 3 to 4 week period. Some commercial fishing occurs on Utah Lake; however, because of their rarity, few, if any, June suckers are captured. Monitoring of the commercial catch could be necessary, especially if the June sucker population begins to increase in the future.

C. *Disease or predation.* The June sucker currently faces predation and competition from various exotic piscivorous fish which have been introduced into Utah Lake. The decline of sucker numbers to present levels appears to correspond closely with the introduction of white bass and walleye in the mid-1950's. Competition and predation from exotic species is one of the serious threats to the survival of the June sucker. Over 20 exotic fish species have been introduced into Utah Lake during the past 100 years. Radant and Sakaguchi (1981) reported that the most successful introductions of exotic species has been with the carp (1886), largemouth bass (1890), black bullhead (1893), channel catfish (1919), walleye (1955), and white bass (1956). The dominant fish in Utah Lake today are the white bass, walleye, channel catfish and carp, all exotic species.

Although parasitism is not a known problem at this time, very little information is available. More work needs to be done on impacts of various diseases on the June sucker (Hickman, 1984).

D. *The inadequacy of existing regulatory mechanisms.* Although the State of Utah lists the June sucker as a protected species, illegal killing still occurs. Protesled species status by the State of Utah does not provide any protection for the habitat of the June sucker.

E. *Other natural or manmade factors affecting its continued existence.* The impact of pollution from local communities may be adversely affecting this species but more information is needed to document this threat.

The Service has carefully assessed the best scientific information available, regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list the June sucker as an endangered species. The habitat of this fish is threatened with alteration through dewatering and degrading water quality, competition by exotic species, and illegal killing during the spawning run. Those threats are too significant to merit a proposed listing as "threatened."

Critical Habitat

Critical habitat, as defined by section 3 of the Act means: (1) The specific areas within the geographical area

occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (i) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being proposed for the June sucker to include the lower sections of two major tributaries of Utah Lake. Included as critical habitat are the lower 7.4 kilometers (4.3 miles) of the main channel of the Provo River (as measured from its confluence with Utah Lake) and the lower 3 kilometers (2 miles) of the main channel of the Spanish Fork River (as measured from its confluence with Utah Lake). These sections of the Provo and Spanish Fork Rivers are all located in Utah County, Utah. While the June sucker is found throughout Utah Lake, these areas are those vital to its recruitment and requiring special management considerations. In the future, however, suitable habitat in Utah Lake and additional sections of the Provo and Spanish Fork Rivers could be proposed as critical habitat if they are found to be essential to the conservation of the species.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. Any activities such as habitat alteration or increased water use from Utah Lake, Provo, and Spanish Fork Rivers could be detrimental to this species and would need to be examined on a case by case basis. Additionally, the introduction of exotic species into the June sucker's habitat along with their associated parasites, could easily harm the June sucker through predation, competition and possibly parasitism. If any Federal activities are planned for the Provo and Spanish Fork Rivers (portions designated as critical habitat) which might affect the sucker or its habitat, these actions would have to be taken under Section 7 consultation to prevent any adverse impacts on the species.

It has been suggested that the Central Utah Project (portions of the Bonneville Unit), presently under construction, could impact this species by reducing and changing flows in the Provo River, the major spawning site of the June sucker, and affect portions of Utah Lake resulting in habitat loss for the species while potentially increasing habitat for exotic species. However, recent discussions between the Fish and Wildlife Service's Regional Endangered Species staff and representatives from the Bureau of reclamation, Utah Water Conservency District, and the Utah Division of Wildlife Resources have indicated that the proposed listing is compatible with the development of this project.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service will consider the critical habitat designation in light of all additional relevant information obtained prior to the time the final rule is prepared.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initated by the Service following listing. The protection required of Federal agencies, and prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires all Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this provision of the Act are codified at 50 CFR Part 402, and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(4) requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service. Since there is Federal funding involved in the Central Utah Water Project, consultation will be required if this listing is finalized.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce listed species. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions would apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered fish or wildlife under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of endangered or threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to the June sucker;

(2) The location of any additional populations of the June sucker and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the range and distribution of this species;

(4) Current or planned activities in the subject area and their possible impacts on the June sucker; and

(5) Any foreseeable economic and other impacts resulting from the proposed designation of critical habitat.

Final promulgation of the regulations on the June sucker will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** October 25, 1983 (48 FR 49244).

Literature Cited

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Authors

The primary authors of this proposed rule are Mr. Terry J. Hickman, formerly of the Endangered Species staff, U.S. Fish and Wildlife Service, Room 1406 Federal Building, 125 South State Street, Salt Lake City, Utah 84138, and Dr. James L. Miller, Endangered Species Staff, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93–205, Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159; 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order, under fishes, to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fishes:							
*	*	*	*	*	*	*	*
Sucker, June	*Chasmistes liorus*	U.S.A. (UT)	Entire	E		17.95(e)	N/A
*	*	*	*	*	*	*	*

3. It is further proposed to amend § 17.95(e) by adding critical habitat of the June sucker as follows: The position of this entry under § 17.95(e) will follow the same sequence as the species occurs in § 17.11.

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

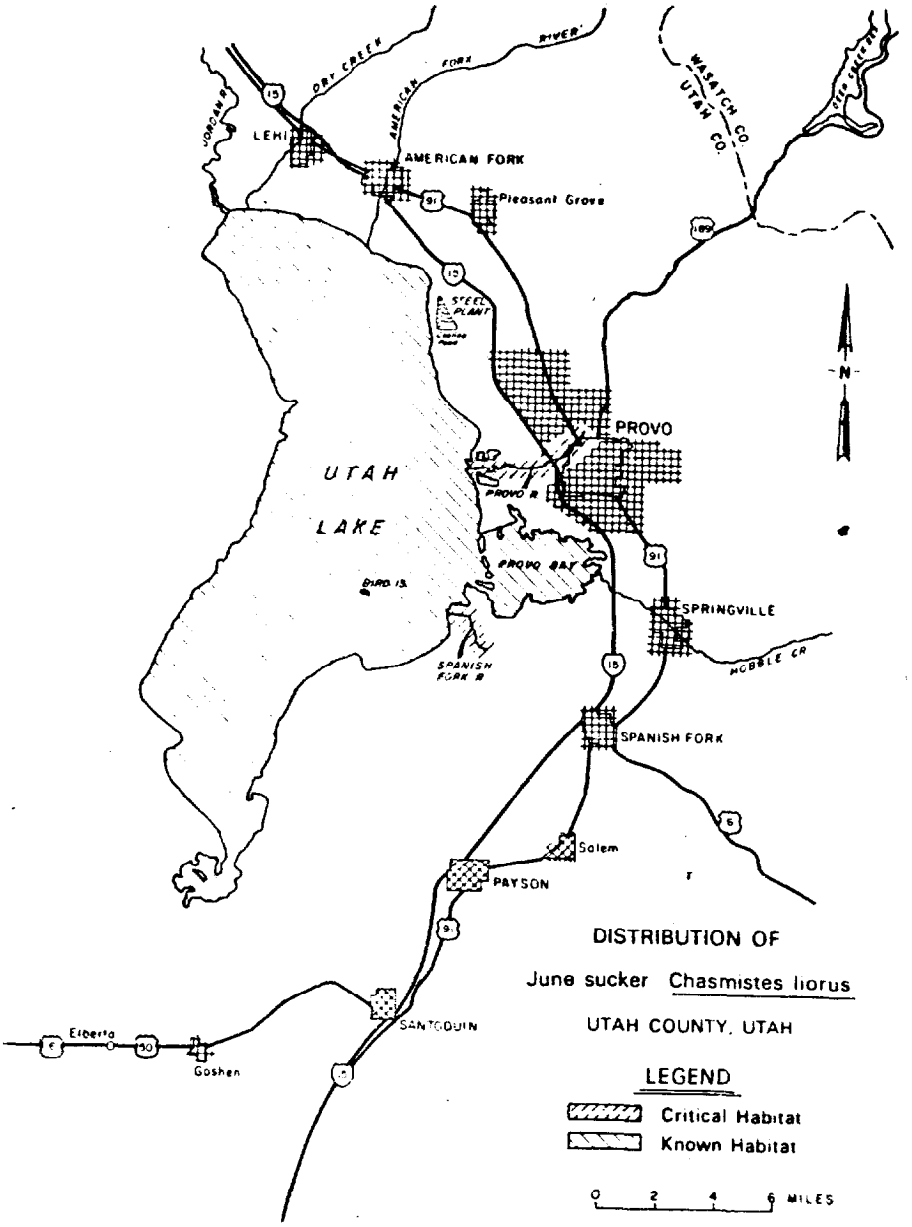
(e) *Fishes.*

June sucker (Chasmistes liorus)

Utah, Utah County; Provo River; Sec. 4, T7S, R2E; to Sec. 2, T7S, R2E—the lower 7.4 kilometers of the main channel of the river as measured from its confluence with Utah Lake.

Utah, Utah County; Spanish Fork River; Sec. 32, T7S, R2E, to Sec. 15, T8S, R2E—the lower 3 kilometers of the main channel of the river as measured from its confluence with Utah Lake.

Known constituent elements for all areas proposed as critical habitat include streams with clean unpolluted constantly flowing water 1 to 3 feet deep over a clean unsilted gravel substrate with quiet backwater areas and pools 1 to 3 feet deep along the margin of the stream.



Dated: June 18, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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